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Jeremiah Smith

Objective

Seeking employment in challenging electronics engineering position.

Experience

2001-Present RF Micro Devices Billerica, MA

Design Engineer

- Design and test ICs for fiber optic data communications applications.
  - Limiting amplifier, transimpedance amplifier, laser driver.
- Implement and use laboratory test and measurement systems.
  - Fiber alignment, laser controllers, digital communication analyzers, vector network analyzers, bit-error rate testers.
- Use of Agilent ADS, Cadence, Protel, and AutoCAD software.
  - Circuit design and simulation, integrated circuit layout, prototype evaluation printed circuit board (PCB) design and modeling.

2000 University of Michigan, Ann Arbor Ann Arbor, MI

Graduate Student Instructor

- Microwave Circuits.
  - Topics: transmission lines, S-parameters, matching networks, power dividers, directional couplers, filters, mixers, and amplifiers.
- Supervise student labs; give recitation lectures; grade homework.

1999-2000 California Institute of Technology Pasadena, CA

Teaching Assistant

- Principles of Microprocessor Systems.
  - Topics: assembly language, proper coding techniques, and debugging tactics in the context of an instructor-designed Intel 80188XL-based hardware system.
- Microprocessor Systems Laboratory.
  - Topics: further develop assembly language, digital design, and debugging skills in the context of student-designed and –built Intel 80188XL-based digital audio recorder.
- Introduction to Electrical Engineering.
  - Topics: complex math, Fourier series analysis, and basic circuits in the context of a series of labs using a student-modified FM radio.

1999 Hughes Space & Communications Co. El Segundo, CA

B. S. Engineering Student

- Design, build, test, and tune C-Band (7-GHz) Low-Noise Amplifier.

1998 California Institute of Technology Pasadena, CA

Summer Undergraduate Research Fellowship

- 21-MHz Class-E Power Amplifier.
- Semifinalist in Perpall Speaking Competition.

Education

Fall 2000 University of Michigan, Ann Arbor Ann Arbor, MI

- Electrical Engineering coursework:
  - Monolithic Amplifier Circuits, Solid State Microwave Circuits.

1996-2000 California Institute of Technology Pasadena, CA

- B.S. Electrical Engineering.
- Electrical Engineering coursework:
  - Analog Electronics, Principles of Microprocessor Systems, Microprocessor Systems Laboratory, Fundamentals of Energy Processing Systems, Analog Project Laboratory, Introduction to Linear Systems, Introduction to Physics and Techniques of Remote Sensing, Introduction to Physics of Semiconductors and Semiconducting Devices, Communications Systems Fundamentals, Application of Remote Sensing in the Field, Optoelectronics and Optoelectronic Devices, Experimental Projects in Electrical Engineering, Microprocessor Project Laboratory, Microwave Circuits and Antennas.
- Physics and Applied Physics coursework:
  - Classical Waves, Quantum Mechanics and Wavefunctions, Solid-State Electronics for Integrated Circuits.
- GPA 3.6/4.0.

Fall 1999 St. John's College, Cambridge University Cambridge, U

- Physics and Electrical Engineering coursework:
  - Electrodynamics and Special Relativity; VLSI Design, Technology, and CAD; Optoelectronic Technology; Electronic Circuits.

Skills

Electrical Engineering

- Analog design
  - High-speed integrated circuits.
  - Hybrid microwave circuits.
  - Power amplifiers.
  - FM links: VCOs and PLLs.
- Digital design
  - Discrete and programmable logic devices.
  - Microprocessors and microcontrollers (Intel and Motorola).
- Controls
  - Linear systems, LaPlace and Fourier transforms, Bode plots.
  - Feedback theory and implementation, circuit and system level.

Programming Languages

- Pascal, C, C++, Assembly (Intel x86 and Motorola), PALASM, HTML.

Software

- Circuit design and simulation: Agilent ADS, Cadence, HSPICE, Puff.
- Integrated circuit layout: Cadence.
- PCB design: Protel, Puff.
- CAD: AutoCAD.

Mechanical

- Machine shop: can use drill press, milling machine, lathe.
- Experience with small engine maintenance and repair.

Hobbies

Walking, hiking, reading, basketball, and cooking.